

. optimolocus .

Number 1

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From the Director

I debated whether to focus this introductory column on partnerships or communication. Building stronger partnerships is one of our top priorities, but the point of this newsletter is about doing a better job of communicating who we are and what we're doing. Then I realized that partner-hip and communication are just two sides of the same coin.

So let me introduce this newsletter as one of the steps we're taking to communicate better with our many partners and information users.

But first, a word about our newsletter's name. In 1995, Montana State University researchers Kelly Miller and Mike Ivie identified a species of damselfly new to science and endemic to Montana. They named it *Enallagma optimolocus*, from the Latin *optimum* (best) and *locus* (place), in reference to Montana's unofficial motto, "the last best place." Initially we got a few puzzled looks, but we figured it would make a fine newsletter name; after all, one of the Montana Natural Heritage Program's tasks is to help identify those last and best places that are strongholds for species and biological communities that are rare, declining, or particularly vulnerable. This information contributes to ensuring that we are responsible stewards of this state and the biological richness it supports.

Earlier this year, we went through a strategic planning process in which many of you provided valuable input. One thing we heard loud and clear was that "the Heritage Program is one of Montana's best-kept secrets". We aim to change that. Not by making news headlines, but by talking and listening regularly with key partners; doing more outreach to folks who could or should be using our services; and getting information out to let you know what we're up to.

In this newsletter, which we plan to publish three times a year, we'll tell you about:

- ❖ what we're doing (projects, surveys, studies)
- ❖ new capabilities or resources that are available (in reports, on our website, in our databanks), and
- ❖ new and remarkable facts we're learning about Montana's natural diversity.

We hope that this update will help you in your work, and also that you'll find it informative and downright interesting. Heritage Program staff are doing fascinating and important work, and we want to share it with you. And, by all means, let us know what you think!

Sue Crispin

1999 Species of Special Concern Lists Available

Revised versions of the Montana Natural Heritage Program's **Animal Species of Special Concern** and **Plant Species of Special Concern** are available on our website (nris.state.mt.us/mtnhp) or by calling our office (4064440914).

These lists include information on plant and animal species that are known or considered by experts to be rare, sensitive, threatened or endangered throughout their range or in Montana, or in need of further research.

Also included in the lists are the designations given to species by the Bureau of Land Management, U.S. Forest Service, and the U.S. Fish and Wildlife Service. These designations are in addition to the global and state ranks (G Ranks and S Ranks) that provide a perspective on the degree of rarity or abundance of a species both throughout its range, and within Montana.

To make sure you receive future list updates, send us your name, address, and e-mail address, and indicate whether you prefer to receive a hard-copy list or electronic (and printable) version via e-mail attachment.

Comments and suggestions on the list and its contents are always invited.

Montana Rare Plant Field Guide Debuts on Web

The Montana Natural Heritage Program has unveiled the Montana Rare Plant Field Guide on the Internet (www.nris.state.mt.us/mtnhp), then navigate to "plants," then "field guide") The guide provides desktop access to information on over 300 plant species of special concern in Montana, including:

- ☞ species and habitat photos
- ☞ diagnostic illustrations
- ☞ concise habitat descriptions
- ☞ distribution data
- ☞ searching by status, land management or location
- ☞ bibliography

Credit belongs to the many botanists, artists, and photographers who contributed their knowledge and work. **Funding** was provided by the **Montana Department of Agriculture** (through the Noxious Weed Trust Fund), the **Biological Resources Division** of the USGS, and the Montana State Office of the **Bureau of Land Management**.

We sincerely thank all of you who helped make this resource a reality.

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A PARTNERSHIP BETWEEN THE NATURE CONSERVANCY AND
THE MONTANA STATE LIBRARY

optimolocus: Latin *optimum* (best) and *locus* (place), from *Enallagma optimolocus*, a new species of damselfly endemic to Montana identified in 1995

Planning Ahead for the Next Four Years

"A plan is nothing. Planning is everything."
Dwight Eisenhower

After 14 years of growth and service, and before embarking into the new millenium, it was time to figure out just where the Montana Natural Heritage Program was going, and how, indeed, we were going to get there.

To guide us in this effort we went straight to the source: our users and partners. In February, over 50 individuals participated in interviews and focus groups to help us better understand our market, identify needs, see opportunities, and learn about our strengths and weaknesses.

And so this June we completed a strategic planning process to clarify the Heritage Program's mission, priorities, and how to best structure our work over the next four years.

Overall, our partners and clients gave us very high marks. You said that our staff are well respected, information is considered scientifically credible, service is good, and our affiliation with the Montana State Library offers a neutral corner in the often highly-charged natural resource arena.

The major need expressed by these focus groups was simply for MORE; in particular, information that focuses on areas of rapid growth; addresses natural communities and large landscapes; includes private lands as well as public; and is web-accessible. Problem areas included lack of programmatic visibility, and documentation of data completeness.

Four major user groups emerged from our analysis:

land & resource management agencies
conservation groups and land trusts
regulators
planners.

These are the groups who most rely on heritage information to accomplish their goals, and who have significant responsibility for managing or conserving Montana's natural heritage. And while we recognize the many other users of program information and services, these four groups comprise our principal "target markets."

Four areas emerged as crucial to our success:

effective delivery of data and information products;
completeness and accuracy of the data;
collection and processing of new information; and
secure funding.

Based on this information, we identified five essential goals aimed at making the Heritage Program stronger, more effective, and better able to meet our users' needs.

Ecology Program Manager Hired

In April, we welcomed **Catherine Jean** to our staff as the Ecology Program Manager. In creating this position, we made a commitment to building our ecological databases so that we can provide information on the quality and significance of vegetation communities, and the sites and land-scapes in which they occur. We were fortunate that Cathie could join us to lead this effort.



Cathie comes from Utah, where she grew up in a ranching family and attended Southern Utah and Utah State University, earning her Masters in Forest Ecology. She joined the US Forest Service in 1990, serving as Ecologist/Botanist on the Winema National Forest in Oregon, and came to

Montana by way of the Humboldt-Toiyabe National Forest in northeastern Nevada, where she led the riparian classification/monitoring and Research Natural Area programs.

Cathie brings strong management, partner-building and ecological skills to her new position. Please feel free to contact Cathie if you have or know of ecological information that may be of use as we work on documenting rare or declining community types and high quality community assemblages and landscapes. She can be reached at (406) 444-0915, or at cjean@state.mt.us

(continued...)

(Four Year Plan ...continued)

FOR THE NEXT FOUR YEARS WE WILL FOCUS ON:

- ◆ **QUALITY-CONTROL** to document the completeness and verify the accuracy of existing records.
- ◆ **DATA DISSEMINATION**, use and sharing agreements and mechanisms with our principal users.
- ◆ **GLOBALLY IMPERILED AND VULNERABLE SPECIES AND COMMUNITIES:** Identify and document the locations, basic characteristics, ranks, and significant sites for all, as well as best examples for a significant share (30% or 150 total) of all **COMMUNITY TYPES**. Expand the databases to include **AQUATICS** and **ADDITIONAL SPECIES GROUPS**.
- ◆ **ECOLOGICAL AND MANAGEMENT INFORMATION** for 100 priority species or communities.
- ◆ **A 20% INCREASE IN OVERALL FUNDING**, of which at least 50% is highly reliable from year to year, for a healthy program funding base.

If you would like to receive a summary of the plan, contact Melony Bruhn at (406) 444-3009 or mbruhn@state.mt.us.

1999 Field Projects



On the Red Bench Trail in Glacier National Park, Sara Lubinski, Steve Cooper, and Debbie Sullivan pause in their vegetation mapping work.

Through the summer, Heritage Program biologists have been conducting an array of inventory projects across Montana to identify significant species and communities, and to characterize the sites that support them.

The results from field work such as this are a primary source of new information that keeps the MTNHP databases growing and up-to-date. Many of our inventories combine the disciplines of botany, zoology, and community ecology; others focus specifically on plants or animals—sometimes a specific taxonomic group or even a single species.

Most of these projects are done in cooperation with partner agencies and organizations, including: the Bureau of Land Management, U.S. Fish and Wildlife Service, Environmental Protection Agency, the Biological Resource Division of the USGS, U.S. Forest Service, and Montana Department of Environmental Quality. The resulting data from all these projects will be standardized and incorporated into the Heritage Program data bases, to the benefit of all.

Here's a quick rundown of summer field projects that will be yielding data and reports later this fall and winter:

Interdisciplinary projects:

- Sheridan and Powder River county inventories;
- biologically-significant sites in the Upper Yellowstone watershed;
- Wetlands of the North Fork Flathead;
- An inventory of the Bitter Creek drainage in Valley County.

Botany projects:

- Bighorn Canyon rare plant survey;
- A study of Water Howellia (*Howellia aquatilis*) hydrology;
- Persistent-sepal Yellow-cress (*Rorippa calycina*) along the Yellowstone River.

Zoology projects:

- Centennial Valley sandhills inventory;
- monitoring of Harlequin Ducks in northwest Montana
- Grassland bird surveys in central Montana;
- Presence and distribution of bats in selected mountain ranges;
- Globally-rare snail species in the Mission Mountains.

A Heritage Program Primer

"So where does your money come from?" "Aren't you with The Nature Conservancy or something?" "But you're part of state government?" These are the kinds of questions we're often asked about the Montana Natural Heritage Program's administrative and funding structure. Here are the basics:

In 1985, the Montana Legislature established a Montana Natural Heritage Program and, at the same time, the Natural Resource Information System. It selected the Montana State Library as the host agency for both these programs; after all, what better place to locate a natural resource information clearing-house than a library?

The Heritage Program concept was founded in the mid-70s by The Nature Conservancy (TNC), a non-profit conservation organization. TNC had developed and refined the computer programs and methods to manage extensive information on the status and location of species and natural communities, and offered this technology to the state (There are now heritage programs in all 50 states).

Since then, the Montana State Library has biennially contracted with TNC to keep the Montana Natural Heritage Program in operation.

About 35% of the Heritage Program's funding comes from legislature-appropriated state sources, including: the Resource Indemnity Trust Fund; the Montana Department of Transportation; Montana Fish, Wildlife and Parks, and the Montana Department of Environmental Quality.

The balance of our funding is raised by program staff through grants, contracts, and cooperative agreements with agencies and organizations. State and private dollars are leveraged with federal dollars: the outcome is a lot of mileage for every dollar spent, and information on Montana's biological resources that is available and accessible to all.

We think it's an excellent example of how public-private partnerships can work.

Ecologically Significant Wetlands in the Flathead Drainage

Last year, the Heritage Program began an ambitious effort to systematically identify and document ecologically significant wetlands throughout Montana. With a lead grant from US-EPA through Montana's Dept. of Environmental Quality, and additional funds from the Montana Department of Fish, Wildlife & Parks, we started this work in the Flathead Valley of northwest Montana.

The Flathead Valley was selected, in consultation with the Wetland Council, because of the tremendous diversity of wetlands that occur there—among the highest in the Rocky Mountains. Wetlands in the study area include temporarily flooded forests dominated by spruce and yellow skunk cabbage, rich and productive marshes in valley bottom oxbows and depressions, sedge meadows in glacially scoured troughs, willow bottoms laced with beaver ponds, floristically diverse peatlands with springs and seeps, and glacial kettle ponds with permanent lakes and vernal pools.



Safe Harbor Marsh, an example of a *Typha latifolia*-dominated wetland surveyed by Jack Greenlee, MTNHP Wetlands Ecologist.

Like other areas of the arid West, the importance of wetlands in the Flathead far exceeds their relatively small area. Wetlands in the Flathead provide habitat for a wide range of plants and animals, ranging from the diminutive bog lemming to the wide-ranging grizzly bear to plants found exclusively in the world's boreal regions. In addition to plant and animal habitat, wetlands in the Flathead provide important and undervalued ecosystem functions like storage areas for floodwater, maintaining streamflows in dry seasons, and filtering out particulates to improve water quality.

Our inventory work last summer included both public and private wetlands, and focused on the Flathead Lake, Stillwater, and Swan drainages. Heritage Ecologist Jack Greenlee identified potential high quality wetlands by talking with local experts and by

studying National Wetland Inventory maps and aerial imagery. Criteria used to select wetlands for inventory included large size, absence of geomorphic or hydrologic modification, presence of intact native plant communities, concentrations of rare plants or animals, and intact uplands.

Over 60 wetlands were surveyed during the field season, and Heritage ecologists documented the types of wetland plant communities present, their quality and condition, rare or sensitive species present, and the condition of the surrounding landscape as it related to the integrity of the wetland. Each site was rated for

ecological significance based on its quality and features, with 12 rating as Outstanding, 12 Very High, 15 High, and 15 Moderate. Of these, 31% are primarily in private or corporate ownership, 31% primarily state-owned, 35% primarily on federal lands, and one is a TNC preserve. A summary of this report will be available soon on the MTNHP website.

Like other areas of the arid West, the importance of wetlands in the Flathead far exceeds their relatively small area.

The results of the inventory also showed some interesting trends. Some types of wetlands, like valley bottom wet meadows and riparian communities, have declined in quality and acreage. In contrast, some marsh communities, like open water or cattail marshes, appear to be more common than they were historically. A few types, like peatlands and spruce swamps, have always been rare and are especially important because they provide outstanding habitat for wildlife and for rare plants and animals.

The wetland information being gathered by MTNHP will be used by government agencies, watershed groups, land trusts, local planners, Conservation Districts, and others involved in wetland protection to help ensure that protection, mitigation, and restoration efforts address those wetlands which contribute most to conserving biological diversity, as well as maintain the ecological health of Montana's watersheds.

During the summer of 1999, MTNHP's wetland inventory work has focused on the North Fork Flathead and the Upper Yellowstone River watershed. So stay tuned for upcoming results.



Zoologist Paul Hendricks conducts surveys for amphibians and reptiles in the North Fork Flathead drainage.